MASTER VIEW KVM SWITCH

USB ENABLED

USER'S MANUAL

CS-172

Read this guide thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit and/or any devices that connect to it.

This package contains:

- 1 Master View CS-172 KVM Switch
- 2 KVM Custom Cable Sets
- 2 USB Cables
- 1 User Manual

If anything is damaged or missing, notify your dealer.

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Contents

Overview
Features
Hardware Requirements
Console
  Computer
  Cables
Introduction
Installation
Operation
  Manual Port Selection
  Hot Key Port Selection
    Selecting the Active Port
    Auto Scan Mode
    Last/Next Mode
Appendix
  Troubleshooting
  Specifications
  Radio & TV Interference Statement
  Limited Warranty

Overview

The Master view CS-172 represents a revolutionary new direction in KVM Switches: a dual function 2 port KVM Switch / 1 Port USB Hub control unit. As a KVM (keyboard, video, mouse), switch, the CS-172 allows access to two computer systems from a keyboard, mouse, and monitor console utilizing either standard mouse and keyboard ports, or the USB connection for the keyboard and/or mouse. At the same time, it allows the two PCs and/or Macs to utilize the USB port connection to access a USB peripheral device (keyboard, mouse, printer, scanner, modem, CCD camera, etc.), on a "one computer at a time" basis.

The CS-172 handles the data connection between itself and the connected computers in two ways:

- Using traditional mouse and keyboard ports and traditional KVM extender cables.
- Using USB ports and USB cables

Installation and operation are as easy as can be. Simply connect the cables. The computers will recognize the USB peripherals the first time they come in contact with them and automatically install the necessary drivers. There is no other software installation necessary. Since the Master View CS-172 intercepts keyboard input directly, it works on any hardware platform and with all operating systems.

The Master View CS-172 provides two convenient methods to access the computers connected to the system: using the push button Port Selection switch located on the unit's top panel; and by entering Hot Key combinations from the keyboard.

There is no better way to save time and money than with a Master View CS-172 installation. By allowing a single console to manage the attached computers and USB peripherals, the Master View CS-172 eliminates the expense of purchasing separate keyboards, monitors, mice, and peripherals for each system. Moreover, it saves all the extra space they would take up, and eliminates the inconvenience and wasted effort involved in constantly having to move from one computer to the other.

Features

- 2 Computers Can Share a Single Console (Monitor, PS/2 Keyboard, and PS/2 Mouse), plus USB Peripherals
- Mouse Protocol Conversion - Control both PC/AT and PS/2 PCs With One PS/2 Mouse*
- Eliminates Driver Conflict Between the Console's Mouse and the Computer Configurations*
- Notebooks Can Use the Console's Mouse and Keyboard At the Same Time**
- Easy to Install - No Software Required - Standard Cables to Connect to the Computers Is All It Takes
- Easy to Operate - Computer Selection Via Push Button Switch or Hot Keys - Auto Scan Function to Monitor Computer Operation
- LED Display For Easy Status Monitoring
- Superior Video Quality - Ultra High 150 MHz Bandwidth Supports Up To 1920 x 1440
- Supports DDC, DDC2, DDC2B (Display Data Channel 2)
- Hot Pluggable
- Saves Time, Space, Power, and Equipment Costs

* Under PS/2 Mouse operation.

** Under USB Mouse and/or Keyboard operation.

Hardware Requirements

Console

For the console you will need:

- One VGA, SVGA, or Multisync monitor capable of the highest resolution that you will be using on any computer in the installation
- One PS/2 Mouse or USB Mouse
- One PS/2 Keyboard or USB Keyboard

Note: You can connect a PS/2 mouse and/or keyboard and a USB mouse or keyboard up at the same time. The system will accept input from whichever one you happen to be working with.

Computer

The following equipment must be installed on each computer that is to be connected to the system:

- To use the USB connection:
- Windows 98 or iMac/G3 300, 350, 400 (or any Mac with USB support)
- A VGA, SVGA or Multisync card.
- A USB Host Controller installed on the system.
- For traditional bus connections:
- Either a 6-pin mini-DIN (PS/2 style), or DB-9 (standard serial), mouse port.*
- Either a 6-pin mini-DIN (PS/2 Style) keyboard port with +5V DC on pin 4 and Ground on pin 3, or a 5-pin DIN (AT Style) keyboard port with +5V DC on pin 5 and ground on pin 4.*
- A DB 15 to HDB 15 VGA adapter (for Apple systems)

* See the note under Cables in the next section.

Cables

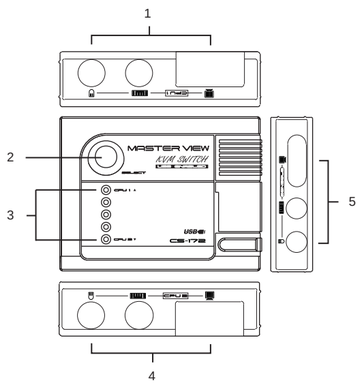
Although it is possible to use standard extender cables to connect the computers to the Master View CS-172, for optimum signal integrity and to simplify the layout, we strongly recommend that you use the high quality CS Custom Cables that are provided as part of the package.

Note: 1. The keyboard and mouse cables have PS/2 style connectors at each end:

- If your PC uses an AT style keyboard socket, you will need to use the PS/2-to-AT keyboard adapter (Part No. 2A-106, any standard keyboard adapter will work) in order to plug the cable into the PC's keyboard port.
- If your PC uses serial connectors for the mouse ports you will need to use a PS/2-to-Serial adapter (Part No. 2A-105, attempting to use a standard serial adapters will fail), in order to plug the cable into the PC's mouse port.
- Because of the wiring and pin assignments, you cannot use a Serial-to-PS/2 adapter at the end that plugs into the CS-172. Therefore, attempting to use a standard serial extender cable with adapters at both ends will fail.

2. You can eliminate the use of extender cables altogether by connecting the CS-172 to the computers over the USB bus with USB cables.

Introduction



1. CPU Port 1 Connector Ports

   The traditional bus extender cables that connect back to the video, keyboard and mouse ports on the computer you are designating as Computer 1 plug in here. Each port is identified by an appropriate icon.

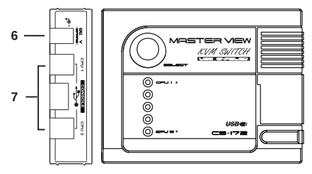
2. Port Selection Button:

   Pressing the Selection Button switches access back and forth between the computers.

3. Selected LEDs:

   Lights to indicate the currently selected port. Depending on the port's status, the LED may flash according to a specific pattern (see the table in the Appendix for details).

4. CPU Port 2 Connector Ports:



5. Console Connector Ports:
   The PS/2 mouse and keyboard cables, as well as the monitor cable, plug in here. Each port is identified by an appropriate icon.

   The traditional bus extender cables that connect back to the mouse, keyboard, and video ports on the computer you are designating as Computer 2 plug in here. Each port is identified by an appropriate icon.

6. Power Jack

   The (optional) power adapter plugs in here.

7. USB Ports

   a) If you choose to use the USB to connect the CS-172 to your computers, use standard USB cables to connect from the CPU1 and CPU2 B type USB ports to the USB port on the computer.

   b) If you want to connect a peripheral device for the computers to share, plug it into the A type USB connector.

Note: The drivers for most USB devices (CCD Cameras, Scanners, Printers, e.g.), are required to be shut down before you disconnect the device, or else the system may crash. When you switch computers with the Port Selection Switch, it is the equivalent of disconnecting the device. Therefore, if you have peripheral devices (other than a keyboard and mouse) connected to these ports, you must be sure to shut down the USB drivers for them before switching computers.

Installation

Before you begin, make sure that power to all the devices (Master View CS-172, both PCs and any USB peripherals) you will be connecting up have been turned off.

1. Connect the Console:

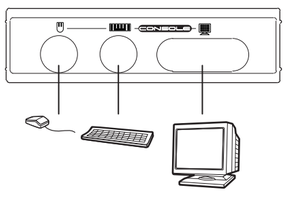
   a) Plug the monitor into the VGA connector on the right panel Console section of the Master View CS-172 unit.

   b) Plug in the keyboard and mouse:

   - If you are using a PS/2 keyboard and/or mouse, plug it/them into the Console port connectors on the right panel of the Master View CS-172 unit.
   - If you are using a USB keyboard and/or mouse, plug the A type connector end of the USB cable into the A type USB connector port on the left panel of the Master View CS-172 unit.

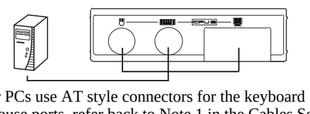
   c) If you want to connect up a USB peripheral device for the computers to share, plug its USB cable into the A type connector port on the left panel of the Master View CS-172 unit.

Note: It is possible to have both traditional bus and USB keyboards and mice connected at the same time.



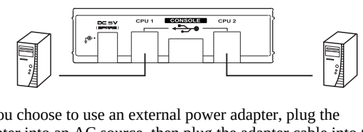
2. Connect the Computers:

   a) If you are connecting up using the traditional bus ports, use the extender cables (as described in the Cables section), to connect the monitor, keyboard and mouse ports of the PCs to the Master View CS-172 CPU Ports, as shown in the diagram below.



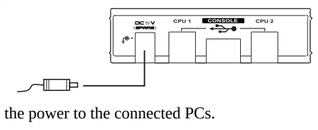
Note: If your PCs use AT style connectors for the keyboard and mouse ports, refer back to Note 1 in the Cables Section on p. 5.

   b) If you are connecting up over the USB, plug the B type connector ends of the USB cables into the CPU1 and CPU2 B type USB connector ports on the left panel of the Master View CS-172 unit; plug the A type connector ends of the USB cables into the USB ports on the computers.



3. If you choose to use an external power adapter, plug the adapter into an AC source, then plug the adapter cable into the unit's Power Jack.

Note: The CS-172 does not require external power. Use of a DC 5V power adapter is optional, and requires a separate purchase.



4. Turn on the power to the connected PCs.

Operation

Controlling both PCs in your Master View CS-172 installation from a single console could not be easier. Two port selection methods that provide instant access to either PC are available:

- Manual Port Selection
- Hot Key Port Selection

Note: The CS-172's Power On default is to link to Port 1. If the PC attached to Port 1 is inactive, the monitor will be blank so it may appear as if the unit is not functioning. This is not the case. Simply use one of the Port Selection methods (described below), to switch to the active PC on Port 2.

Manual Port Selection

With Manual Port Selection you simply press the Port Selection button on the Master View's top panel to switch back and forth between computers. The Selected LED on the top panel lights to indicate which port is active.

Note: The drivers for most USB devices (printers, e.g.), must be shut down before you disconnect them, or else the system may crash. Switching computers with the Port Selection Switch, is the equivalent of disconnecting the device. Therefore, if you have USB peripheral devices (other than a second keyboard and mouse) connected to the CS-172, you must shut down their USB drivers before switching.

Hot Key Port Selection

Hot Key navigation allows you to select the active PC directly from the keyboard. The Master View CS-172 provides several Hot Key navigation features:

- Selecting the Active Port
- Auto Scan Mode

Note: Hot Keys will not work with a USB keyboard. In order to use this feature, you must do it from a PS/2 keyboard.

Selecting the Active Port:

You can toggle between the two PCs by pressing and releasing the left or right Ctrl key twice [Ctrl]+[Ctrl].

Note: The combination must be on the same side (Left [Ctrl]+[Ctrl], or Right [Ctrl]+[Ctrl].

To indicate that the switch has taken place, a single tone sounds if the target is PC1; two tones sound if the target is PC2.

Auto Scan Mode:

The Master View CS-172's Auto Scan feature automatically switches between the two PCs at regular 5 second intervals so that you can monitor their activity without having to take the trouble of switching yourself. To invoke Auto Scan Mode, press and release the left Shift key, then press and release the right Shift key (Left [Shift]+Right [Shift].

Once scanning begins, it continues until you press the [Spacebar] to exit Auto Scan Mode. The port that was active at the time scanning stopped remains active.

Note: 1. While Auto Scan Mode is in effect, none of the other keyboard keys will function. You must exit Auto Scan Mode by pressing the [Spacebar] in order to use the console for anything else.

2. The drivers for most USB devices (printers, e.g.), must be shut down before you disconnect them, or else the system may crash. When the computers switch under Auto Scan Mode, it is the equivalent of disconnecting the device. Therefore, if you have USB peripheral devices (other than a second keyboard and mouse) connected to the CS-172, you must shut down their USB drivers before invoking Auto Scan Mode.

Appendix

SELECTED LED Display:

Activity	Meaning
Off	Port is not selected.
On (Steady)	Port is connected to an active PC.
Flashing (On and Off equal)	Port is connected to an active PC and is being accessed in Auto Scan mode.
Flashing (On long; Off short)	Port is connected to an active PC and is being accessed in Last/Next mode.

Troubleshooting:

Note: If you are experiencing problems, first make sure that there are no problems with the cables, and that they are all properly connected.

Symptom	Cause	Action
Keyboard Not Responding*	Keyboard needs to be reset	Unplug the keyboard from the Console Keyboard Port, then plug it back in.
	Master View needs to be reset	Turn off the PCs and the Master View unit. Wait five seconds; turn the Master View unit on; then turn the PCs on.
	Master View is in Auto Scan Mode	Press the PS/2 keyboard's [Spacebar] to exit Auto Scan Mode.
Mouse Not Responding**	Mouse needs to be reset	Unplug the mouse from the Console mouse Port, then plug it back in.
	Master View needs to be reset	Turn off the PCs and the Master View unit. Wait five seconds; turn the Master View unit on; then turn the PCs on.
	Mouse in unsupported mode	The Master View unit does not support some combo mice (with extra buttons and wheels which can be used as either a PS/2 or serial mouse) when they are in serial mode - switch the mouse to PS/2 mode if you wish to use the extra buttons/wheels. If the problem persists, change the mouse and/or mouse driver. Try a regular mouse and a generic mouse driver (like the ones that come with the operating system).
Video Problems	Resolution and/or Bandwidth set too high	The Master View unit supports VGA, SVGA, Multisync, and XGA (interlaced), with resolutions of up to 1920 x 1440. The maximum bandwidth is 150 MHz.
	Cable quality not good enough	We strongly recommend that you use the high quality cables provided with this package. Using high quality cables should eliminate possible video problems.

* The Master View unit is designed to work with AT and PS/2 keyboards. Older XT (84 key) and some older AT keyboards (those with the function keys on the side), will not work.

** Some Notebook computers, notably the IBM Thinkpad and Toshiba Tecra, have trouble working with the Master View unit when their mouse and keyboard ports are used simultaneously. To avoid this problem, only connect the mouse port or the keyboard port to the Master View unit. If you connect the mouse port, you will need to use the notebook's keyboard when you switch to make the notebook the active computer.

Specifications:

Power Consumption		DC 5V 80mA (max.)
PC Connections		2
Port Selection		Push Button Switch; Hot Keys
LEDs		Selected x 2
Connectors	Keyboard	1 x 6 pin mini-DIN female (PS/2 Style) - Console
		2 x 6 pin mini-DIN female (PS/2 Style) - CPU Ports
	Mouse	1 x 6 pin mini-DIN female (PS/2 Style) - Console
		2 x 6 pin mini-DIN female (PS/2 Style) - CPU Ports
	Video	1 x HDB-15 female (std VGA/SVGA) - Console
		2 x HDB-15 male (std VGA/SVGA) - CPU Ports
	USB	2 x B Type (for computer connection)
		1 x A Type (for USB peripheral connection)
Scan Interval		5 secs.
Operating Temp.		5 - 40° C
Storage Temp.		-20 - 60° C
Humidity		0 - 80% RH, noncondensing
Housing		Plastic
Weight		220 g
Dimensions (L x W x H)		130 x 100 x 35 mm

Radio & TV Interference Statement:

WARNING!!! This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Limited Warranty

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